Greenway District Wins Environmental Award

Poisoned Silver Bow Creek showing signs of life

By Jim Tracy, Editor

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Slimy sculpins, blood worms and long-nosed suckers.

What sounds like ingredients for a witch's brew are really species that have returned to Silver Bow Creek, a 23-mile stretch of contaminated water that not long ago couldn't support animals or plants.

Now the creek and stream bank are coming back to life, and the agencies responsible for restoring them to health have been recognized for their work by the National Association of Environmental Professionals, or NAEP.

In April, the project will receive two NAEP awards – for conservation and environmental stewardship. Sharing the award are the three agencies involved in restoring the creek – the Greenway Service District, which is part of the local governments in Anaconda and Butte, the Montana Department of Environmental Quality, and the Natural Resource Damage Program, or NRDP, which is managed by the Montana Department of Justice.

"We don't do the work that we do to get awards for it," said Joel Chavez, whose official title is streamside tailings project officer with the Mine Waste Cleanup Bureau, Remediation Division, Montana DEQ.

"It's always nice to be recognized, but more important, it's all about getting the mess cleaned up. We're really accepting it for Silver Bow Creek."

Bringing the creek back to life may be the biggest undertaking of its kind ever in the United States, maybe in the world, Chavez said.

What the team of engineers, biologists, botanists and assorted other professionals are doing is creating – or rather re-creating – a waterway ruined by industry.

Since the late 1800s, tailings and other mine wastes laced with mercury, arsenic, cadmium, lead and zinc have been deposited in the creek bottom and floodplain.

Here's an official description from an NRDP fact sheet of the damage: "These toxic discharges produced a metals-impacted floodplain and streambed sediments and virtually eliminated aquatic life in the stream. Tailings deposited in the floodplain are generally toxic to plants and have resulted in a floodplain that is largely devoid of vegetation and is largely incapable of supporting wildlife."

That has changed in the three-mile stretch of stream that has been restored since the project began in 1999. Where nothing survived in the water before, biologists have found sculpins, worms, mud minnows and three species of suckers. They've seen ducks, geese and muskrats paddling in the stream and red-winged and yellow-headed blackbirds perched in the reeds and willows along the banks. They've greened the creek with cottonwood, water birch and aspen trees, currants and rose bushes and varieties of sedges, grasses and forbs.

Aquatic insects, included under the label macroinvertebrates, also have returned to the creek.

“We’re starting to see a larger diversity of those than was there,” Chavez said. “Macroinvertebrate communities have provided more compelling evidence of reduction in metals contamination.”

Other insects also have returned. Dramatic evidence of that was the sighting last year of a flock of migrating bats feasting on flying insects along the creek.

To make the creek habitable for fish, engineers have added bends to create “sinuosity,” installed pools in series, widened the stream and placed logs at key locations mimicking what occurs naturally in streams in Montana.

The cleanup of Silver Bow Creek, ongoing since 1999 as part of a Superfund remedial action, has been coordinated by the DEQ, consulting with the Environmental Protection Agency. In 2000, the Natural Resource Damage Program joined DEQ in bringing a restoration component to the project that goes beyond the remedies required under Superfund.

Greg Mullen, an environmental specialist with the NRDP, explained that the restoration, by law, allows the Greenway District to return the creek to a baseline, or predisturbance, condition.

“It’s not necessarily pristine. It’s not necessarily like Glacier Park, but we can bring it back to what it would be without those metals there,” said Mullen. “Those impacts will still be around. There are still metals in the system. We’re not getting everything.”

Funds for restoration come from a 1999 settlement between Atlantic Richfield Co. on one side and the state and tribal governments on the other.

ARCo agreed then to pay $215 million to the state to resolve certain claims. From that settlement, $80 million plus interest was set aside for DEQ and EPA to implement a “remedy” for Silver Bow Creek. Some of the remaining amount is being used to cleanup the creek through by improving and restoring habitat.

The cleanup also involves moving massive amounts of earth, including 1,400 acres of contaminated mine tailings and soils alongside the stream. In all, engineers expect to remove 4 million cubic yards of tailings. The project, now in its sixth year, should be complete by 2010.

“The three of us have worked very well together, frankly,” said Mullen of the state and local government partnership that will receive the NAEP award. “It’s unique. We’re breaking new ground.”

And bringing it back to life, too.